

### **REMARKS**

Please reconsider the Application in view of the above amendments and the following remarks. In the Office Action, the Examiner rejected claims 3-15, 17, and 18 under 35 U.S.C. §103(a) as unpatentable over United Kingdom Patent Specification No. 1,596,330 ("Thompson") and U.S. Patent No. 6,062,313 ("Moore"). Furthermore, the Examiner rejected claim 16 under 35 U.S.C. §103(a) as unpatentable over Thompson in view of Moore, and in further view of U.S. Patent No. 5,295,546 ("Giannesini"). In response, Applicant hereby requests the Application be Amended as described herein and respectfully traverses.

#### **Summary of Amendments**

By this paper, Applicant hereby requests amendment of claims 3, 8, 9, 12-15, 17, and 18 and cancels claim 6 to more clearly define the claimed subject matter. Particularly, independent claims 3, 13, and 17 are amended to recite the *permanent* separation of natural gas from produced hydrocarbons. Applicant respectfully asserts that support for the claim amendments may be found in the specification and Figures as originally filed and that no new matter is added. Furthermore, Applicant respectfully asserts that no further search is necessary to examine the claims as amended.

#### **Response to Examiner's Rejections**

In response to the Examiner's rejection of independent claims 3, 13, and 17 under 35 U.S.C. §103, Applicant respectfully traverses on the grounds that the Thompson and Moore references, either taken alone or in combination, do not teach all elements of the claims as amended.

Particularly, referring initially to amended claim 3, neither Thompson, Moore, nor any combination thereof disclose, suggest, or teach a method to develop a sub-sea hydrocarbons field including producing hydrocarbons comprising natural gas and oil. Additionally, neither reference discloses *permanently* separating the natural gas from the *produced* hydrocarbons, such that *permanently separated* natural gas is conveyed to a vessel and the remaining hydrocarbons are conveyed to a *rigid* storage tank.

In contrast, Thompson merely discloses a production system comprising only natural gas. Thompson is completely silent as to a production system comprising the production of oil, let alone the production of oil *and* natural gas. As such, the Thompson reference does not contemplate the separation of produced natural gas from produced oil, and their separate storage. Furthermore, the Moore reference does not disclose, teach, or suggest the claim limitations missing from the Thompson reference.

Particularly, the Moore reference is directed to a flexible, sub-sea, storage tank configured to separate particulate matter from returning drilling fluid. First, as argued in at least one prior response to Office Action, as a filtering device for returning drilling mud, the storage tank of Moore is device used in drilling operations. In contrast, the present application is directed to production operations. While the Moore reference suggests (without support) that the storage tank disclosed therein *may* be useful in production wells as a temporary storage container for the *periodic* removal of oil, it is unlikely that such a tank is usable in the performance of oil and natural gas production operations. Despite the explicit language of Moore, one of ordinary skill in the art would not believe the tank of Moore to be usable in a production operation, as various governing bodies

and regulatory agencies would likely not permit the storage of oil on a sea bed in a such a flexible, unprotected tank. Nonetheless, claim 3 (in addition to claim 17) has been amended to require the remaining oil to be stored in a *rigid* storage tank.

Next, the Moore reference does not disclose, teach, or suggest *permanently* separating natural gas from produced hydrocarbons (containing natural gas and oil) and conveying that *separated* natural gas to a vessel. However, once those fluids pass through the separation tank, the separated gasses are re-introduced to the drilling mud prior to return of the drilling fluids to the surface. Moore explicitly states that the separated gas is "introduced directly into the return conduit" where it will again mix with returning drilling fluids. Thus, with respect to amended claim 3, the disclosure of more does not disclose or suggest "*permanently* separating the *natural* gas from the produced hydrocarbons" as claimed. (Emphasis added). Furthermore, the Moore disclosure does not disclose or suggest "conveying *separated* natural gas to a vessel" as claimed. (Emphasis added). Instead, Moore merely separates the gas (temporarily) and then re-injects it into the drilling fluids exiting the separation tank before the combined (*i.e.*, not separated) fluids are returned to the surface.

Similarly, with respect to claim 13 as amended, Thompson, Moore, and any combination thereof fail to disclose a sub-sea separation system configured to permanently degasify natural gas from produced hydrocarbons as claimed. Furthermore, with respect to claim 17 as amended, Thompson, Moore, and any combination thereof fail to disclose a means for permanently separating the natural gas from produced hydrocarbons and a means for conveying remaining hydrocarbons in a rigid storage tank.


Furthermore, because claims 4, 5, 7-12, 14-16, and 18 properly depend from, and are thus narrower in scope than independent claims 3, 13, and 17, they are allowable for at least the same reason. Therefore, Applicant respectfully asserts that claims 3-5 and 7-18 as amended are in condition for allowance and requests removal of their rejection under 35 U.S.C. §103.

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Furthermore, Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0591, under Order No. 06558/011002 from which the undersigned is authorized to draw.

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Respectfully submitted,

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